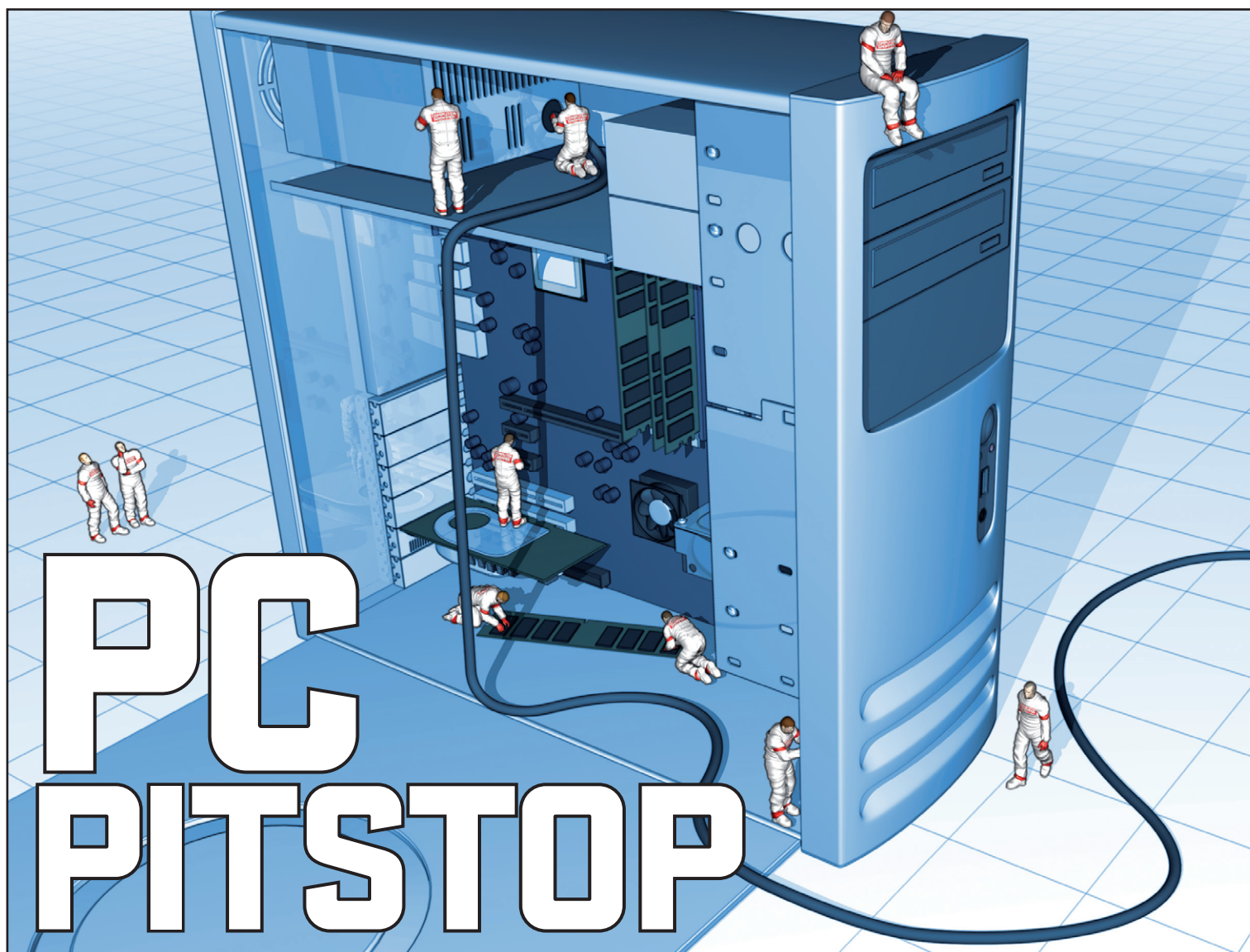




Over time your PC will slow down regardless of how fast your hardware is. However, Windows' built-in tools can get your system up to speed, as David Fearon explains

Computers are supposed to be getting faster, but we still often find ourselves twiddling our thumbs, waiting for programs to start. And over time, it's common to find that performing tasks takes longer and longer. Modern computers might be titans of power compared to their predecessors of 10 or 20 years ago, but a Windows XP PC can still seem terribly slow.

This is because a computer is only as fast as its biggest bottleneck. In most cases, the biggest bottlenecks are nothing to do with the hardware but the detritus that builds up on the hard disk and the programs that are running in the background without you necessarily being aware of them. Here we'll show you how to get back to a leaner, more efficient computer that's noticeably faster and has more free space than you thought.

BE PREPARED

If you're tired of hearing about the need to back up before you make changes to your Windows installation or hard disk, we're making no apologies. It's difficult to convey the sense of dread at losing your data until it's actually happened, but believe us it's not something you want to experience. Do not, under any circumstances, take the risk of not backing up. If you don't back up your data regularly already, now's the time to start (see our Labs test of backup software on page 121). We also covered this topic in 'The Easy Backup Guide', *Shopper* December 2006, which you'll find on this month's cover disc. We'll go through it again briefly here, though, since it's so important.

There are two precautions to take to get yourself out of trouble should anything go

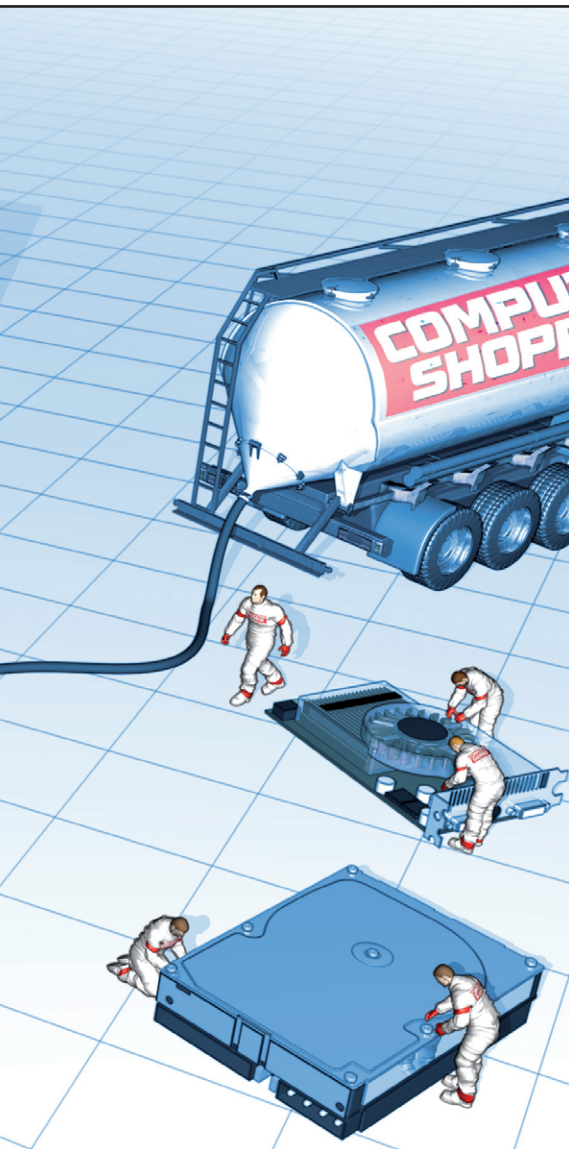
wrong while you're tweaking your system. First, for minor configuration problems that you might want to reverse, you should set a System Restore point. This will let you roll back your programs and settings should anything go awry. It's a 30-second job. Just click on the Start button and go to Programs, Accessories, System Tools, System Restore. Select 'Create a restore point', click Next and enter a name for your reference (for example, pre-PC Check). After a short pause you should be told that the restore point has been created.

If you subsequently want to restore your system, follow the same procedure, but when you open the System Restore tool simply make sure 'Restore my computer to an earlier time' is selected. You'll be given a calendar view of

points. Choose the one you want and click Next a couple of times. Once the point has been restored, the computer will restart. Your documents and data won't be affected but any system-configuration changes should be restored to the way they were.

The second thing to do is properly back up your documents and data. You can do this without having to install any third-party software by using Windows XP's own tool. In XP Professional, again head to Programs, Accessories, System Tools and select Backup. We show you opposite how to get the backup tool working if you're using Windows XP Home.

The Backup or Restore Wizard should launch itself. Click Next, make sure 'Back up files and settings' is selected and then click Next



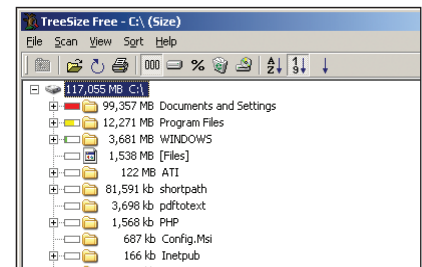
Be content with your contents Find out what's on your hard disk

We saved: 8GB hard disk space

If you're cleaning your system in order to free up drive space, a good starting point is to assess exactly what's taking up that space. The integrated tools of Windows XP itself aren't too good at this. Right-click on a drive icon in My Computer, select Properties and you'll get a pie chart of free space against used space, but that's it. There's no way to get a breakdown of which folders and subfolders are responsible for filling up the disk, other than right-clicking on individual folders and selecting Properties. Even then, you get only the total size of that folder and all its subfolders.

What you need is a utility that walks through your hard disk, adds up the sizes of folders and subfolders and gives you a breakdown of each. The TreeSize utility, downloadable from Jam software (www.jam-software.com) does just that. You can try the Professional version, but TreeSize Free (from the Windows Freeware section of Jam's site) is fine and is free. When you install it you'll get the option of creating a context menu entry. If you select this, whenever you right-click on a folder there will be a TreeSize entry to give you a breakdown of that folder and its contents.

When you first start TreeSize from the Start menu it will present you with a familiar-looking folder tree and then spend a little time scanning your whole disk, assessing the files and folders. Once it's finished you'll see labels showing individual folder sizes, plus traffic-light-style coloured bars against each folder. Red indicates that the folder or the contents of its subfolders are taking up a large percentage of space on the disk. You can drill down into individual folders that are taking up a lot of space to see which subfolders beneath these are the culprits. However, be aware that the



▲ TreeSize is a free tool that gives you an overview of what's eating up your disk space

units of the folder-size labels vary. Smaller folders show size in kilobytes whereas larger ones are in megabytes. If the mix is confusing, click on View in the top menu bar and select 'KB only', or hit the percentage icon in the menu bar to get a percentage view instead.

TreeSize is also more useful for assessing the impact of your applications on your hard disk than just using their reported size in Windows XP's Add or Remove Programs feature (see page 128). This often misreports sizes, and some applications don't show up. Except for a few errant applications that install themselves to the top level of the C: drive, your application installations can be found under C:\Program Files so you should start there.

TreeSize is great for alerting you to rogue folders and applications that are eating up disk space for no reason. On our test system we discovered a game we'd forgotten about, which wasn't showing up in Add/Remove Programs. It was taking up a whopping 7GB of space. There were also a couple of temporary folders on the top level of the C: drive that we'd used to download and unpack various drivers and which totalled over 1GB.

again. Assuming all your important data is filed under My Documents, you can go with the default option of 'My documents and settings' when the wizard prompts you to choose what to back up. If you select the 'let me choose' option, you need to navigate the less friendly directory-browsing tool, so we don't recommend it unless you have data outside the normal locations.

Then click Next and choose a location for your backup. This should not be your hard disk. The ideal location is an external USB hard disk, which you can safely disconnect when you've finished to isolate your data. A network location is another option, but bear in mind that if you have lots of data to back up (say 10GB or more), transferring files over the network could take hours. One thing the backup tool doesn't let you do is burn files to a DVD or CD.

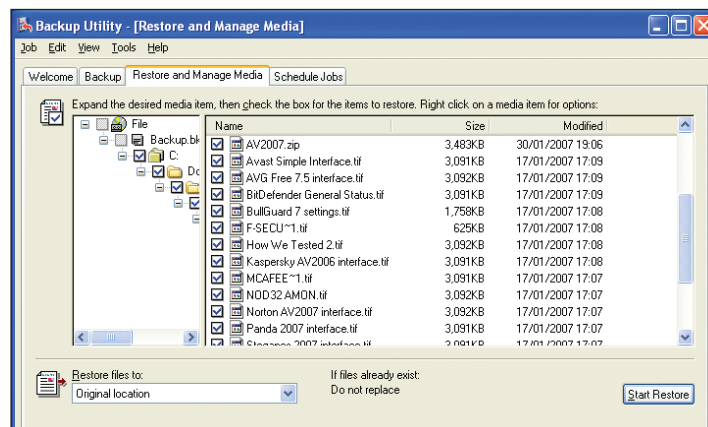
Once you've selected a location and given the backup a name, you can hit Next and then Finish to start the procedure. The system will back up all your data to one single file in the location you specified, with a .bkf file extension. Once the data is backed up, it will also verify the data by reading it back to make sure it's not corrupted. However, one of the shortcomings of XP's backup tool is that errors happen silently. That is, if your backup has gone wrong, you will not be alerted to the problem. It is important, then, that once the backup has finished, you

click on the Report button and review the text log to make sure there were no problems.

One of the classic mistakes people make when backing up files is to do only half the process. Most of us will back up our files, but never actually practise restoring them until disaster strikes. So, as soon as you've made your first backup you should re-launch the Backup tool, select 'Restore files and settings' to do a practice run, stopping short of actually restoring the files (since that can cause its own problems with overwrites). It's a little more complex than

you think, as once you've started the Restore tool you'll have to navigate a dual-pane view and select which folders to restore. Make sure you've explored the restore interface ahead of time.

Windows XP Home Edition users can also use the Backup and Restore tool, but it's not installed by default. To get to it you'll need your Windows CD. Put it in the drive, open an Explorer window and navigate to the VALUEADD\MSFT\NTBACKUP folder. Once you're there, double-click on the Ntbackup.msi file, which will install the Backup utility.



◀ Make sure you've fully got to grips with restoring your backups once you've made them



BOOST YOUR SYSTEM SPEED

GENERAL CLEANUP TIPS

We gained: Startup is now 45 seconds faster

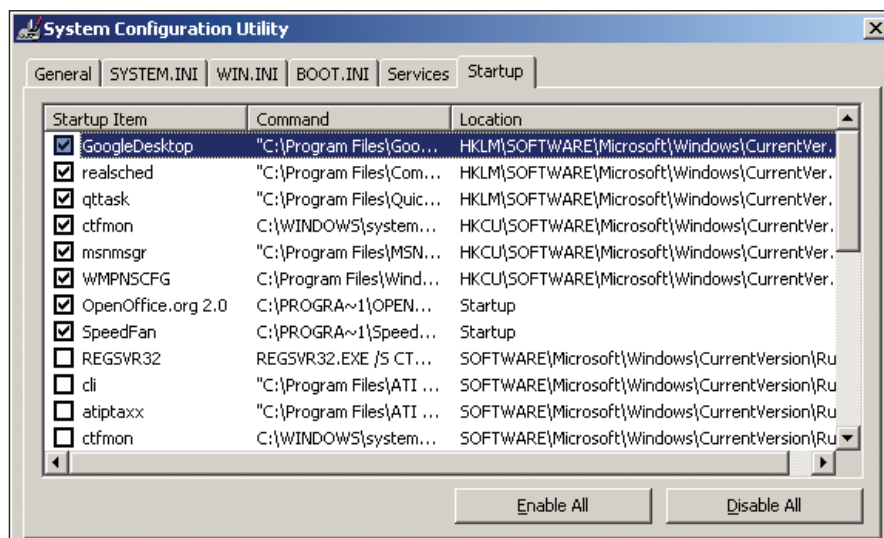
Don't ignore the obvious. Over the course of a year or so, even if you've been very careful not to install extraneous bits and pieces of software on your PC, you'll find that they magically tend to build up when you're not looking. For that reason your first port of call shouldn't be some obscure command-line utility or clever system-cleaning application. It should be the trusty Add or Remove Programs tool, which you'll find in Windows' Control Panel. Be disciplined and simply remove old programs you don't use.

Remember you can view by Name, Size, Frequency of Use and Date Last Used, using the drop-down box at the top right of the screen. Date Last Used is probably the best indicator of applications you can remove. Size isn't necessarily proportional to the impact they'll have on your everyday computing experience, since even a very small program can hog the processor or hard disk, or both.

One problem with Add or Remove Programs is that you'll sometimes find obscure-looking programs that you're not confident you can get rid of without having some sort of undesired consequence on your system. This is where Windows XP's most useful but best-hidden utility comes into play. It's present in every installation of Windows XP and doesn't need any special downloads, and yet you won't find it in the standard Start menu list of programs. Its name is the System Configuration Utility, often just called Msconfig.

CLEANING UP

If it's not in the Start menu, just click the Start button, then Run. Type msconfig into the Run box that pops up, then click OK. After a short pause a window will appear with six tabs. Do not start indiscriminately clicking on tabs and tick boxes before you've read on and understood what you're doing. Msconfig may be a simple tool to get your system running faster, but it can also leave you with a mangled, unbootable XP installation if you don't know what you're doing. For now, ignore every tab you see except the last one, marked Startup. Click on it and it presents

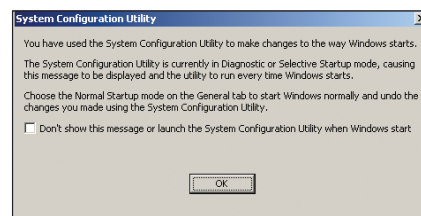


▲ The System Configuration Utility is a fabulous tool for streamlining your PC in just a few clicks

you with a list of the background applications that Windows will load as soon as it boots, without you explicitly starting them yourself.

On a clean, virgin Windows XP installation this will be more or less empty, with perhaps one or two background programs related to your video drivers or, if you're using a notebook, your touch pad (a company called Synaptics produces most touch pads and their related background applications). Come back after a few months, however, and you'll find that this list is full of spurious background detritus related to applications you may have installed yourself but wouldn't have guessed would deem themselves worthy of running automatically as soon as Windows starts.

The great thing about Msconfig is that you can disable nearly all these background programs, preventing them hogging system resources, but in a reversible way. You can rest assured that no program listed in the Startup tab is essential for your computer to start (the same is not true of the Services tab; see page 130 for more on this). However, there may be entries placed in here by your anti-virus, anti-spyware and firewall programs. These should carry the name of their program so they will be easily



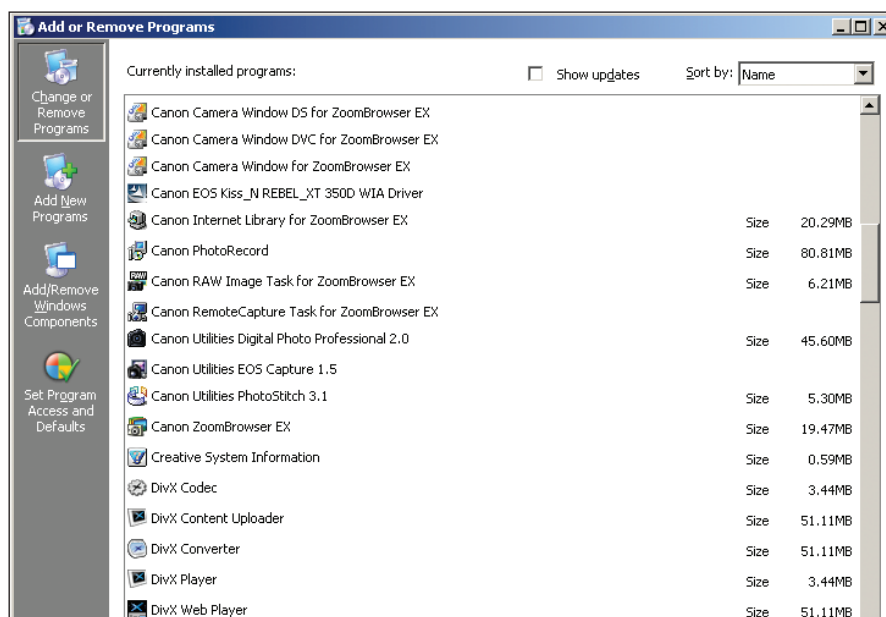
▲ When you use Msconfig you'll see this message. You can safely tick the box to avoid it bothering you again

identifiable. Make sure you don't disable these. The quickest way to give your system an almost guaranteed boost is to click the Disable All button in the Startup tab, then tick the boxes for any entries you want to keep, and click OK. You'll be prompted to restart your PC. When you do so you'll see a pop-up box telling you that changes have been made to the startup configuration. Check the box to tell the system not to tell you about this and you're away.

TALES OF THE UNEXPECTED

In the unlikely event that your PC now fails to do something you expected it to do, or you're missing some function you need, you have two options. The easy one is to start Msconfig again, select the Startup tab once more and hit 'Enable all' then reboot; your PC will be back to exactly how it was before. The long-winded way is to try to identify which of the startup tasks is the one you've discovered you need. This isn't particularly hard, just boring. If the name of the program itself is cryptic (and they often are), expand the Command column of the Startup window. This will show the location of the file on your hard disk, which should give you a pretty good clue of its general purpose and whether it's the cause of the problem. For instance, the path of C:\Program Files\Cyberlink\Power DVD obviously relates to a DVD player for watching movies.

The icons in the Notification Area (the area of the taskbar that contains the clock) usually run using background programs that have started automatically in the way we've described here. That means that hitting Disable All in Msconfig will also clear out the Notification Area, giving you a leaner, less-cluttered-looking Windows desktop free of silly little icons that you probably never clicked on or took any notice of anyway.



▲ Make sure you regularly fire up the Add or Remove Programs tool to keep your system free of clutter



CLEANING YOUR DISK

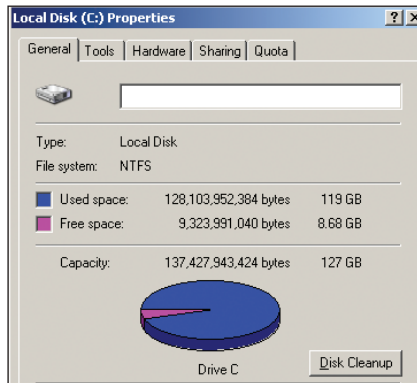
We saved: 23GB hard disk space

Even if you have two or more hard disks, or external USB disks on which you store your media, running out of space on your main hard disk is still a problem since all programs are installed there by default. The My Documents folder is there, too, which can soon fill up with pictures and music if you're not careful.

The obvious solution to the problem is to delete what you don't need. Windows XP has the answer in the form of the Disk Cleanup tool. If you start getting seriously low on disk space, Windows will automatically prompt you to run it, but you can start it manually any time you like. It's more sophisticated than just clearing out the Recycle Bin, too, although people often forget that way of regaining a lot of space. For example, Disk Cleanup allows you to remove Windows components that you don't need.

PREVENTION IS BETTER THAN CURE

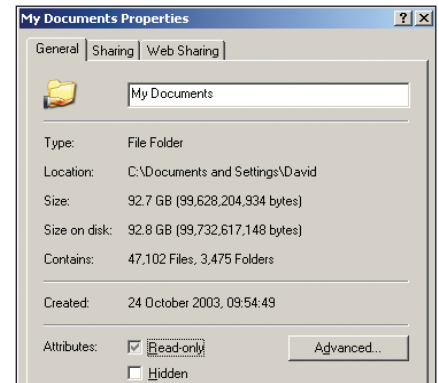
When clearing out your system software, remember that for the most part, all those unwanted files and programs didn't just appear of their own accord. The maxim that prevention is better than cure applies to PCs as well as everything else, and in this case it means stopping and thinking for a second before you install a piece of software. Simply being a little more circumspect about the applications and



▲ As you can see, this hard disk is in serious need of a clearout

programs you install could save you a lot of hassle in the future. It could keep your system more secure, too. The fewer applications you install, the less chance there is of a malicious piece of software finding its way on to your system. Although it goes without saying that you shouldn't install dodgy downloaded software from the internet willy nilly, remember that even large, reputable companies can sometime fall foul of viruses and inadvertently distribute nasty surprises along with their legitimate software. Don't take this as a cue never to install any software again; just be cautious.

Rather than deleting files, one other option you can try is to compress them so they take up



▲ A typical four-year-old My Documents folder. The size is a whopping 92GB

less room on your hard disk. This capability is built into Windows XP, and you can apply it to a whole drive, specific folders or individual files. Just right-click on the drive, folder or file and select Properties. Then, on the General tab, click Advanced and select 'Compress contents to save disk space'. When you click OK the contents will be compressed; for an entire drive or large number of folders this can take a while.

There are a couple of caveats to keep in mind, though. You'll only have the option of compressing if the drive is formatted with the FAT32 file system, and files that are already compressed, including MP3s, photos and movies, won't benefit from extra compression.

HOW TO... Use the Windows Disk Cleanup tool

1 To start it up, click Start and navigate to Programs, Accessories, System Tools. Select the disk you want to clean up and hit OK. The tool will scan the drive, assessing its contents and looking for ways to save you space.

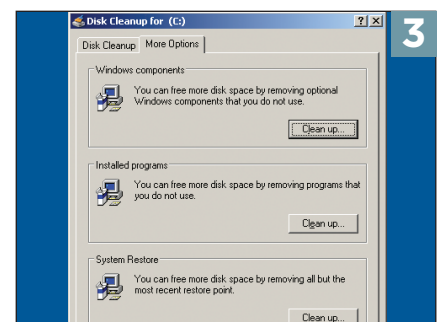
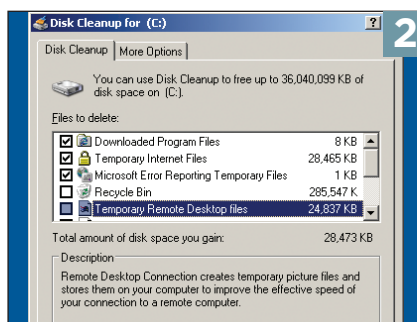
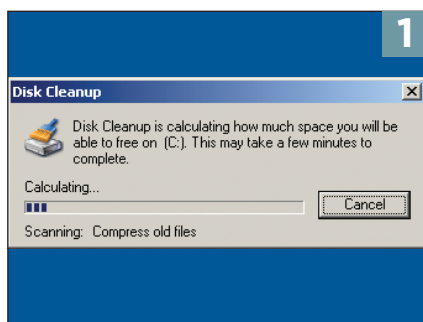
2 Once the scan has finished, a dual-tabbed dialog box will open. This lists all the operations that Windows can perform to clear out your disk, along with the estimated space you can reclaim for each operation. By default only a few operations, such as deleting downloaded program files and temporary internet files, are selected. But there will usually be at least half a dozen extra suggested deletions and modifications. Scan through the list and choose any you want to perform. Clicking on one will give you more information. One of the options will be to compress old files. This can

sometimes save space but it takes a while. More effective is the option to delete all temporary files. Many applications will dump files in temporary folders and never clean them up, which can result in gigabytes of pointless files hanging around. You may also see more esoteric options such as removing setup log files. These usually don't save very much space, but every little helps. Once you're happy that nothing you want to keep will be deleted, hit OK. The operations will be performed and the tool will exit automatically when it's finished.

3 If you're still running out of space, start the tool again, and this time click on the More Options tab. This gives you access to three more ways of freeing up space. You can remove Windows Components you don't need, uninstall programs or remove System Restore points.

Clicking on the Clean Up button under the Installed Programs option simply launches the Add or Remove Programs tool we cover opposite, but the other two could save some extra space. Clicking on the Windows Components option launches the Windows Components wizard, which will allow you to uninstall bits of Windows. However, you're unlikely to save more than about 40MB doing this, and if you're at the point where you're removing bits of your operating system just to eke out some more room it's time to think about upgrading to a larger hard disk.

You can do that without having to reinstall Windows by using a partitioning utility that can clone your system's drive to a new, larger disk. Unfortunately there aren't any free packages that will do this, but we gave away Paragon's Partition Manager Personal 8.0 (www.paragon-software.com) on the February 2007 cover disc.





BEHIND THE SCENES

We saved: 100MB free memory space

Next time you're sitting in front of your PC, have a guess at how many programs are actually running. The temptation is just to look at the taskbar and count the icons. You might have a word processor, email program and a web browser there. But those three applications are just the tip of the iceberg. At any one time, you're likely to have an absolute minimum of a couple of dozen programs running on your computer.

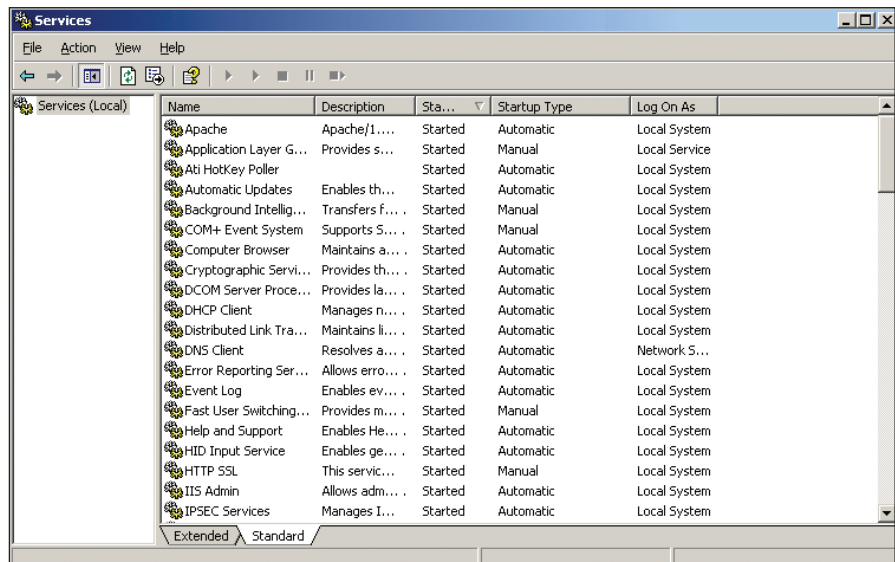
These aren't foreground applications with user interfaces, such as Microsoft Word. They're background tasks, and while some are essential to keep your system running properly, many of them aren't. And just because you can't see them doesn't mean they're not taking up valuable system resources. Every unnecessary program that you have running in the background robs valuable system resources in the form of system RAM and processor time, making your PC slower and less responsive.

There are two basic classes of these programs that you can't necessarily see. The first are simply background processes. These are normal programs that don't have an obvious user interface because they don't need one. Often, but not always, these will have an associated icon in the Notification Area, so you can see it's there. It's easy to tell how many of these you have sitting silently in the background sapping your system resources. You can do this by using Windows Task Manager and its Processes tab.

TASK MANAGER

Task Manager is always available in Windows. Just right-click on a clear area of the taskbar and select it. Alternatively, hit Ctrl-Alt-Del. Depending on your setup this will either launch Task Manager straight away or you'll get the Windows logon screen from which you can choose to fire it up.

Task Manager will start with the Applications tab selected. These are the standard programs that you can 'see' and have taskbar icons. But we're interested in the



▲ There are more things happening in the background on your PC than you might think

Processes tab. Click on it and you'll see every background program that's running on your computer, plus the underlying process behind your foreground applications too. You may be shocked to see that there are a couple of dozen entries, particularly if you've not yet followed our advice on page 128 for clearing out startup programs. You can click on the column headers at the top of the processes list to rearrange them. It's particularly interesting to click the Mem Usage column to see which ones are using the most of your precious memory.

In most cases the big memory hogs will be the processes associated with a well-known application. If you have a lot of tabs open in Firefox, for instance, the Firefox.exe process can easily be using 100MB or more. Remember this is the RAM usage of the program as it's running, not hard disk space, so if you have 1GB of RAM in your PC, an application using 100MB is chewing up 10 per cent of your memory and is likely to be having a significant effect on your system performance. But other background tasks add up, too. To see which ones you could probably get rid of, click on the User Name column to sort by this field, and concentrate

only on the processes whose username is your logon name. Ignore processes marked as 'system', 'local service' or 'network service' (see below for more details on these).

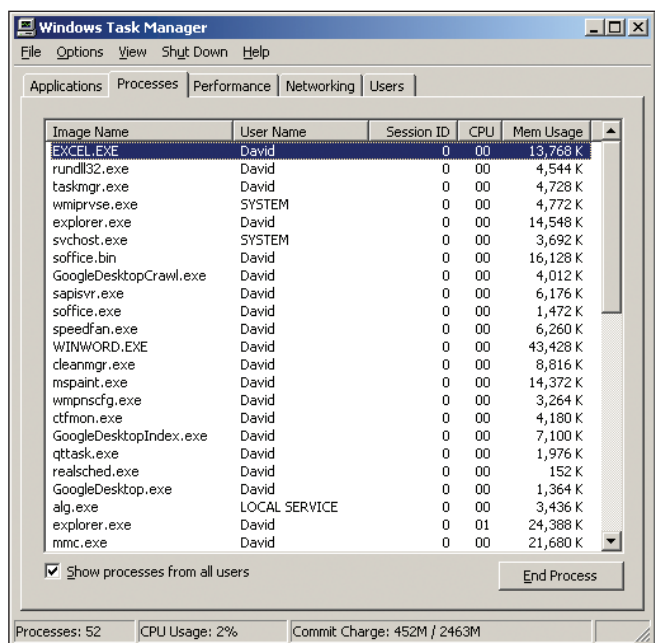
The processes listed under your username are all ones that you can get rid of safely without your system falling to pieces. The trouble is that most of them have incredibly cryptic names, such as *realsched.exe*. The best way to identify these processes and the application that has installed them is to enter their exact name into Google (include the extension, which is usually .exe but sometimes .bin). You're practically guaranteed to get a few dozen hits, most of which will explain what the process is and whether you need it. Make sure you look at more than one site for verification, though, as some websites – particularly those from anti-virus manufacturers – tend to mislabel legitimate processes as virus threats.

In our example, it turns out that *realsched.exe* is the component of the RealPlayer media-player application that sits in the background and occasionally creates those annoying ad windows. Go to the Startup tab of Msconfig (see page 128) and disable it, since this application does nothing useful.

SERVICES

The second type of background task is more important and is called a Service. Windows Services include crucial underpinnings that Windows needs to boot successfully. They're still programs, just like any other, but because of their importance they're handled differently by the operating system. You can see the list of installed Services by going to Control Panel, double-clicking on Administrative Tools and then Services. This gives you useful descriptions of what each service does; you shouldn't make any changes here.

To see which Services you could potentially disable, you can use the trusty Msconfig again (click Start, select Run and type *msconfig*). Instead of the Startup tab, click on the Services tab instead. Make sure the 'Hide all Microsoft Services' box is ticked. Since all the services essential to Windows are from Microsoft, the list you're left with contains the Services that can safely be disabled without affecting system stability. The changes won't come into effect until you restart your PC.



◀ It looks a bit fearsome at first, but when it comes to tracking down rogue programs, Task Manager is your friend



DEFRAGMENTING

We gained: a 10% faster response on day-to-day tasks

The surest sign that your disk needs defragmenting is when Windows seems to be taking an age to boot up and this process is accompanied by lots of disk-grinding sounds as the drive's heads hunt around for bits of files.

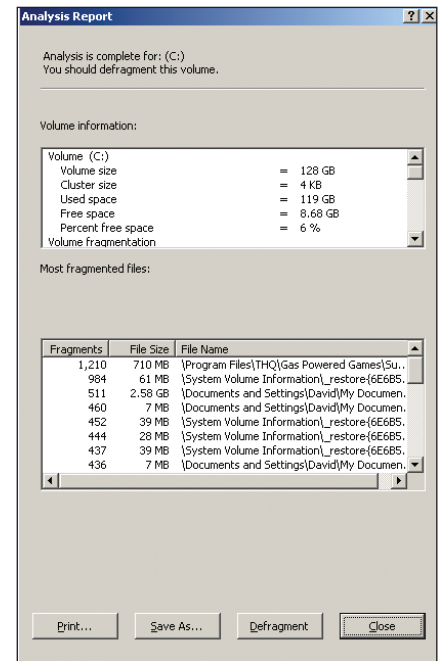
It's time to turn our attention to your hard disk and keeping it in tip-top condition. If your PC is more than about two years old and you've never encountered the concept of disk defragmentation before, keep reading as you can achieve a decent speed boost very easily.

Disk defragmentation occurs because modern hard disks are extremely clever devices. People think of them as just a dumb spinning disk with data on it, but they're far more complex. Their onboard electronics form a complete computer in its own right, and when the main PC tells them to store some data, the disk itself decides exactly where that data should be stored on the magnetic disk platters.

To make operations as fast as possible, when the PC requests the disk to write some data, the disk's electronics start to record that data in the first clear area of the platter it finds. The PC will continue to stream data to the disk, and the disk itself can find it runs out of clear space. So it finds the next clear area and continues writing the data there instead. To the

operating system, there's one continuous file, but that file may be stored in several physical locations on the disk. This is fragmentation. The fact that it's physically scattered around the disk means more work for the disk heads in finding and reconstructing the file to pass it back to the PC. The longer a system gets used, the worse fragmentation becomes, and eventually it starts to have a noticeable impact on speed. This is when you need XP's defragmentation tool (see How to... Defragment your hard disk, below).

Some argue that disk defragmentation is not necessary and doesn't have any noticeable impact on speed, while others argue that you should perform a full defragmentation every time you make changes to keep your PC running smoothly. As usual, a point of view somewhere in the middle is correct. There's little need to defragment your disk when it's below about 10 per cent fragmentation, and Windows' own disk-defragging tool will tell you this. It recommends proceeding only when you analyse a disk and the percentage fragmentation is over 10 per cent. But there's no doubt that once you get a certain fragmentation point over about 30 per cent, your system is likely to be noticeably slower to boot and generally feels less responsive until you've defragged.

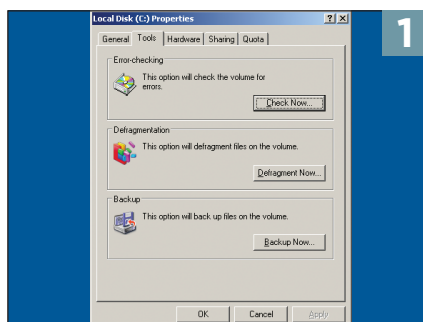


▲ Windows' Disk Defragmenter can analyse your system's hard disk and decide whether defragmentation is necessary

HOW TO... Defragment your hard disk

If you find you have the symptoms of sluggish startup and the constant horrible disk-grinding symptoms we've described above, it's time to fire up Windows' defragmentation tool.

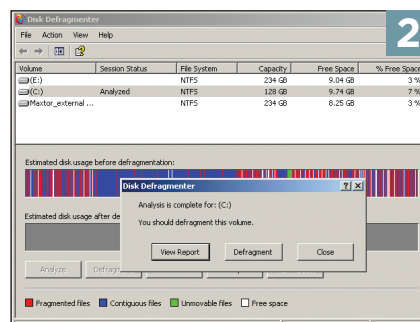
1 While there are lots of third-party defragmentation tools that claim to be more effective than XP's own defragging tool, we've never found that they offer results that are markedly better. Although they can be faster, defragmentation is something you need to do only occasionally so it's hardly worth paying extra to do something that you can do overnight. It is best left overnight as defragging can take hours and, while you can keep using your PC as it's being done, it's best not to. To start the process, double-click on My Computer, right-click on the drive you want to defrag (usually the C: drive) and select Properties. Go to the Tools tab and click the Defragment Now button.



2 The Disk Defragmenter tool starts up, showing all the hard disks in your system at the top. The one you originally right-clicked should be highlighted. As we've mentioned, there's little point in running the tool on a disk that is only a few per cent fragmented, so click on the Analyze button first to check.

While the analysis is running, you'll see the estimated fragmentation graphic display being filled in, giving a representation of the way the data is spread across your disk. Once it's complete, you'll get a dialog box telling you whether Windows thinks you should or shouldn't defragment, based on the percentage of fragmentation it has found.

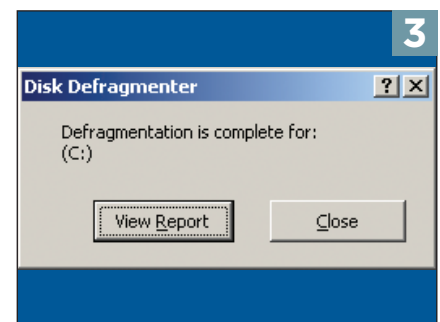
If you want more details you can click on View Report, which will give a comprehensive breakdown of the state of the disk and even tell you which individual files are the most fragmented on your disk.



3 If the tool recommends it, press the Defragment button and away it will go. If your hard disk is particularly full, the tool may come back with an error claiming that there's not enough free space on the disk to run the defragging process. It needs at least 15 per cent of the space on the disk to be free. If that's the case you'll need to clean out your hard disk first (see page 129). It is possible to run the defragmenter anyway even though there's not enough space, but we wouldn't recommend it.

Defragmenting can take hours, and once it's started you should leave your computer alone, since using it will make defragmenting take longer. You'll also hear some disk-grinding noises as it does its work, but this is normal.

Once it's finally complete, there's no need to restart. Your disk is now fully optimised with each file arranged and consolidated into one place on the physical disk platters.





THE REGISTRY

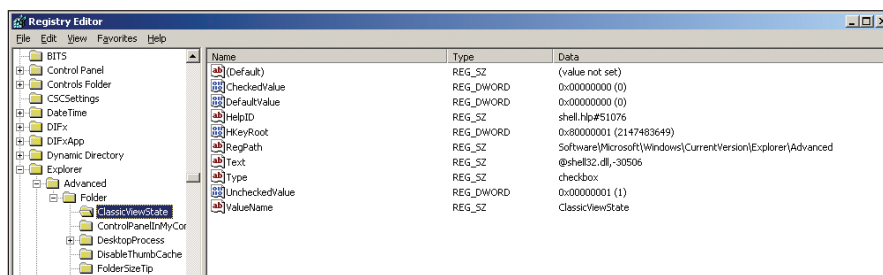
We gained: greater system stability

The Windows Registry is a near-mythical part of Windows, shrouded in mystery and striking fear into the hearts of novices everywhere. This is possibly because the main interface to the Registry itself, the RegEdit application, is hardly user-friendly, but then it's not supposed to be.

The Registry isn't something that we need to use directly. It's useful to programs, though. The 'user interface' to the Registry is really the programs you use – for instance, Control Panel applets – almost all of which will make some sort of change every time you tweak one of their settings.

In fact, the Registry is very simple. It's just a rather unsophisticated database that stores system settings. Both Windows itself and other software you install on your system use the Registry to store whatever settings they might need to, whether that be the name of your current Windows wallpaper or the type of graphics card in your PC.

Because the Registry is used by basically every component of Windows and every third-party application you install, it's very big, with tens of thousands of individual entries. And it gets bigger with time, as new applications are installed and add dozens of new entries, known as keys. It can easily grow to well over 100MB, which doesn't sound like much in today's world of 500GB hard disks, but when you consider



▲ Windows' Registry editor tool is a scary place that you shouldn't visit without a very good reason

that Registry keys are simply very short pieces of text, that's a lot of wasted space.

Just like other parts of the operating system, over time the Registry accumulates lots of leftover bits and pieces and can become inconsistent. These inconsistencies, such as references to files and components that don't exist (known as orphans), won't usually cause major problems but they can cause slowdowns and occasional odd behaviour.

Don't start fiddling with the Registry manually unless you're absolutely sure you know what you're doing. While it's not quite the scary monster that it first appears to be, altering the Registry incorrectly can leave you with an unbootable Windows installation – and you don't want that. It's far better to use an easy, third-party utility.

Cleaning up the Registry reliably in order to reduce its size and save disk space is extremely difficult. In fact, there's not a great deal you can

do about it except reformat your system and reinstall Windows, which is hardly ideal. But removing orphans and inconsistencies can be done pretty easily. Don't try to do it yourself, though. There are dozens of third-party Registry cleaners available, many of them pretty dodgy, but a good free one is CCleaner (www.ccleaner.com; see below for a walkthrough of how to use it to fix Registry issues).

Although CCleaner is very reliable and makes its own Registry backups, before you run anything that's going to mess with the Registry, you should back it up yourself just to be sure. The best free way to do this is with the Windows Backup utility (see page 126 for more details). When it starts up, click the Advanced Mode link in the very first screen, then click the 'Backup Wizard (Advanced)' button. Follow the wizard, but select 'Only back up the System State data'. This will back up the Registry as well as some other key Windows system files.

HOW TO... Repair the Registry using CCleaner

CCleaner is a competent, freeware system cleaner, downloadable from www.ccleaner.com. Its basic functions don't do anything that Windows' Disk Cleanup tool can't do (see page 129), but CCleaner has a trick up its sleeve that Windows can't match: it can check for various inconsistencies and orphans in the Registry.

1 Once you've downloaded and installed CCleaner (it contains no spyware or malware, but pay attention to the installation options), start it up and you'll see a screen much like the one below.

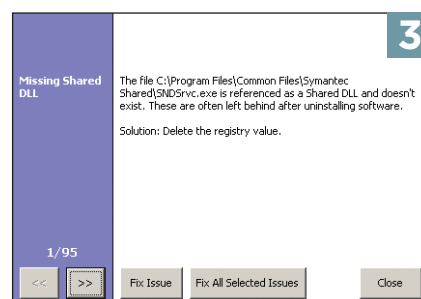
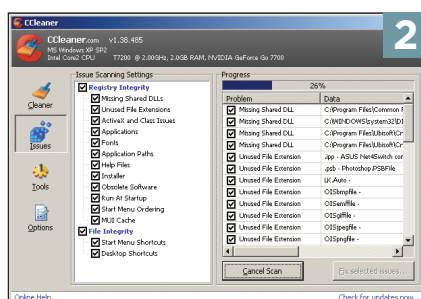
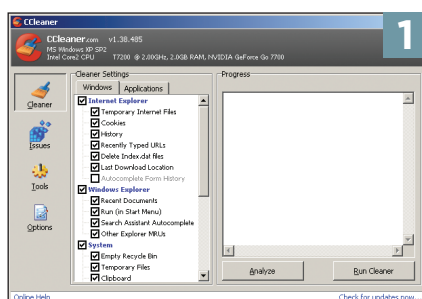
2 We want to use the Registry-fixing functions, which you can get to by clicking on the Issues icon on the left. You'll see the Issue Scanning Settings in the main window, which lists all the problems for which CCleaner can

scan. Most of these are Registry problems, but you'll notice under the File Integrity heading that it can also take a look at your Start menu and Desktop entries to see if there are orphaned entries (that is, entries to programs that have been removed or uninstalled but whose shortcut icons and Start Menu folder are still present). These can be pretty handy so you may as well leave them selected. Click on the Scan for Issues button under the right-hand pane and CCleaner gets to work scanning the Registry for problems.

3 When it's done, you'll see the list of any known problems, along with tick boxes next to them to indicate which ones you want to be fixed. It's pretty safe to leave all the boxes selected, but it's worth scanning the list just to make sure, although the problems you'll see will tend to be pretty technical.

Once you're happy, press the 'Fix selected issues' button. CCleaner will ask if you want to back up the Registry values that will be changed. You should accept this, and save the backup file somewhere safe. The file is a .reg file, so if you need to restore it you need only to double-click it and Windows will apply the backup to the Registry automatically.

Once the file is saved, CCleaner will show you one issue at a time, along with explanations of common causes of the problems. You can go through each one using the arrow buttons and fix the ones you want – on our test system there were 95 issues, so you may be there a while – or simply press the Fix All Selected Issues button and let it carry on automatically. Once it's finished you can step back through the issues to check each one was fixed without errors, before hitting the Close button when you've finished.





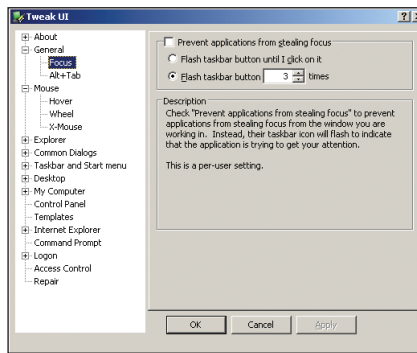
TWEAKUI

We gained: a 50% speedup on thumbnail displays

Among the masses of over-complicated programs that Microsoft produces, there are a few gems. The classic PowerToys set of utilities is one of them. PowerToys are a set of free utilities produced by Microsoft employees and hosted on Microsoft's website. They're not, however, 'official' Microsoft products, so they're unsupported and you use them at your own risk. That said, we've yet to experience any problems with any of them, so you should be pretty safe.

TweakUI is one of the PowerToys that can help you streamline, tune and tidy up your system. Get it from www.microsoft.com/windowsxp/downloads/powertoy/xppowertoy.msp. It's a tiny executable file of 147KB, so the download will take only a few seconds. Once it's downloaded, just double-click on the file and it will install in the usual way. You'll now find it under Start, Programs, Powertoy for Windows XP.

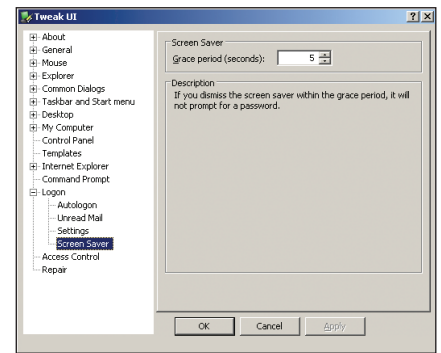
Once it's up and running, TweakUI gives you 15 categories to tweak, many with subcategories of their own. It's worth spending a little time clicking in the left-hand pane and exploring what's there. When you click on a category or subcategory you'll get a full description of what that particular tweak can do. Some of the options simply collect settings that you can change elsewhere. For instance, click on the General category and you'll see a list of interface tweaks that you can mostly get to through standard Control Panel tools.



▲ Stop applications stealing focus with TweakUI...

However, there are lots of settings and functions that TweakUI enables that you can't ordinarily get to. For example, if you want to streamline system startup and get rid of the Welcome logon screen, scroll down to the Logon section, expand it and click on AutoLogon. Select 'Log on automatically at system startup'. Now enter the username you want to log in as, click the Set Password button to enter the password, hit OK and your computer will boot straight into the Windows desktop.

Speeding and streamlining your system isn't just about making your computer faster. It's about configuring the computer not to do things that slow you down when you're working. TweakUI has many excellent little customisations that can help. One of our favourites is the 'Prevent applications from stealing focus' option. Get to it by expanding the General tab and clicking on the Focus category.



▲ ... and make your day a bit more productive, too

Stealing focus occurs when an application or window pops up and becomes the active window instead of the one you're currently using. This is particularly annoying if you're typing and your words end up in the wrong window. If you enable this option, instead of the application stealing focus, its icon will flash on the taskbar. You can even set whether the icon flashes continually until you pay it attention, or only a set number of times.

You'll find a similar anti-irritation mechanism under the Logon category. Click on Screen Saver and you can set the 'grace period' during which you can nudge the mouse and Windows won't ask you for a password if it has only just started up the screensaver. If you're anything like us, that will save you having to re-enter your password about a dozen times a day after the screensaver has kicked in while you were gazing out of the window.

HOW TO... Speed up thumbnail display

An excellent feature of Windows XP is the thumbnail view, giving you previews of images in standard Explorer windows. However, the size and quality of these thumbnails aren't alterable. This is where TweakUI comes in. It can speed up the generation and display of thumbnails, make it easier to browse folders with dozens or hundreds of images, and save disk space, too. Conversely, you can increase the thumbnail size if you want higher-quality previews.

1 First, try the thumbnail view. Open a folder and select Thumbnail from the View menu.

2 Once you've installed TweakUI (www.microsoft.com/windowsxp/downloads/powertoy/xppowertoy.msp), start it up by going to Start, Programs, Powertoy for Windows XP. In the left-hand pane of the main window, click the + sign next to the Explorer category to expand it. Now click on the Thumbnails category. The settings appear in the right-hand pane. There are two settings: Image Quality and Thumbnail Size. Image Quality specifies how detailed the thumbnail is, which also affects its file size. More important is the Thumbnail Size control. Tweak this down to 50 pixels or so and you'll be able to see far more images at once. You'll find the generation of the thumbnails when you first select the thumbnail view in Explorer much quicker than it was when you did this in Step 1.

downloads/powertoy/xppowertoy.msp), start it up by going to Start, Programs, Powertoy for Windows XP. In the left-hand pane of the main window, click the + sign next to the Explorer category to expand it. Now click on the Thumbnails category. The settings appear in the right-hand pane. There are two settings: Image Quality and Thumbnail Size. Image Quality specifies how detailed the thumbnail is, which also affects its file size. More important is the Thumbnail Size control. Tweak this down to 50 pixels or so and you'll be able to see far more images at once. You'll find the generation of the thumbnails when you first select the thumbnail view in Explorer much quicker than it was when you did this in Step 1.

3 Once you've applied the setting, the thumbnail images in any already-open Explorer window won't change; you'll have to close the window and open it again. You'll notice it's not just image thumbnails that are affected. File and folder icons are reduced in size, too, giving you a much more compact view of folder contents if you want it.

If you've increased the size of thumbnails for a clearer view, existing thumbnail images are scaled up rather than resized. You can force Windows to regenerate thumbnails by deleting the thumbs.db file in the folder in question. To see the file you'll need to navigate to View, Folder Options in an Explorer window, go to the View tab and select 'Show hidden files and folders'.

